Geometry

Similarity and Pythagorean Theorem Pre-Assessment

Pre-assessment Corrections/Notes

A ratio is a comparison of two quantities by division written as , a to b, or a:b, where b≠0.

1. Write the ratio of to in the following triangle.

A

13

5

C

B

12

Ratio: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. Are the following two ratios proportional? How do you know?

A proportion is an equation where two ratios are equal. =, where b and d ≠ 0.

Two ratios are equal if both reduce to the same ratio.

3. Are the following two ratios proportional? How do you know?

4. Solve for the missing value.

We use the cross multiply method to solve for a missing value in a proportions. If =, then ad = bc and we can then solve for the missing variable.

x = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5. Solve for x.

Remember that if there is an expression in one of the ratios, the distributive property will need to be used in order to solve the proportion for the missing variable.

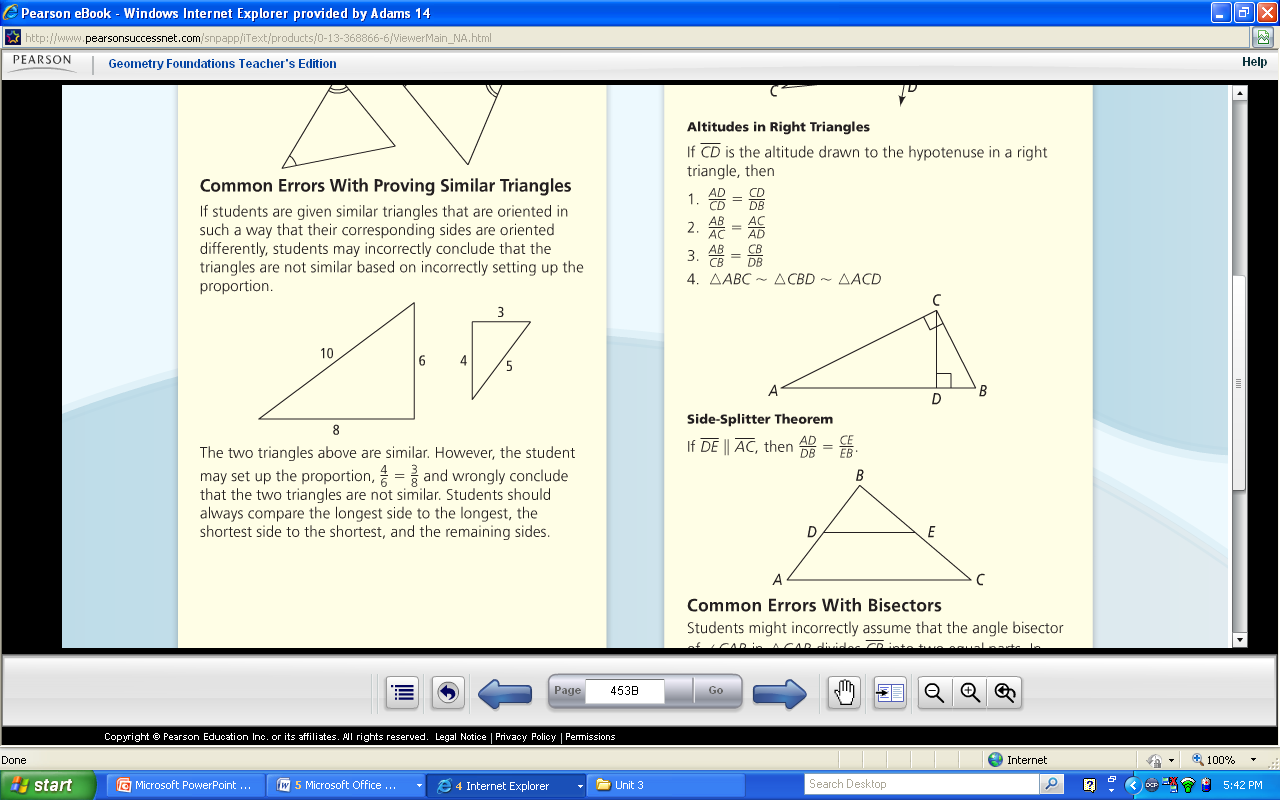
x = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

6. Solve for x.

Distributive Property used twice.

x = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

If two figures are similar (same shape, different size), then a scale factor is used to a go from the first figure to arrive at the other figure by multiplying every dimension by the scale factor.

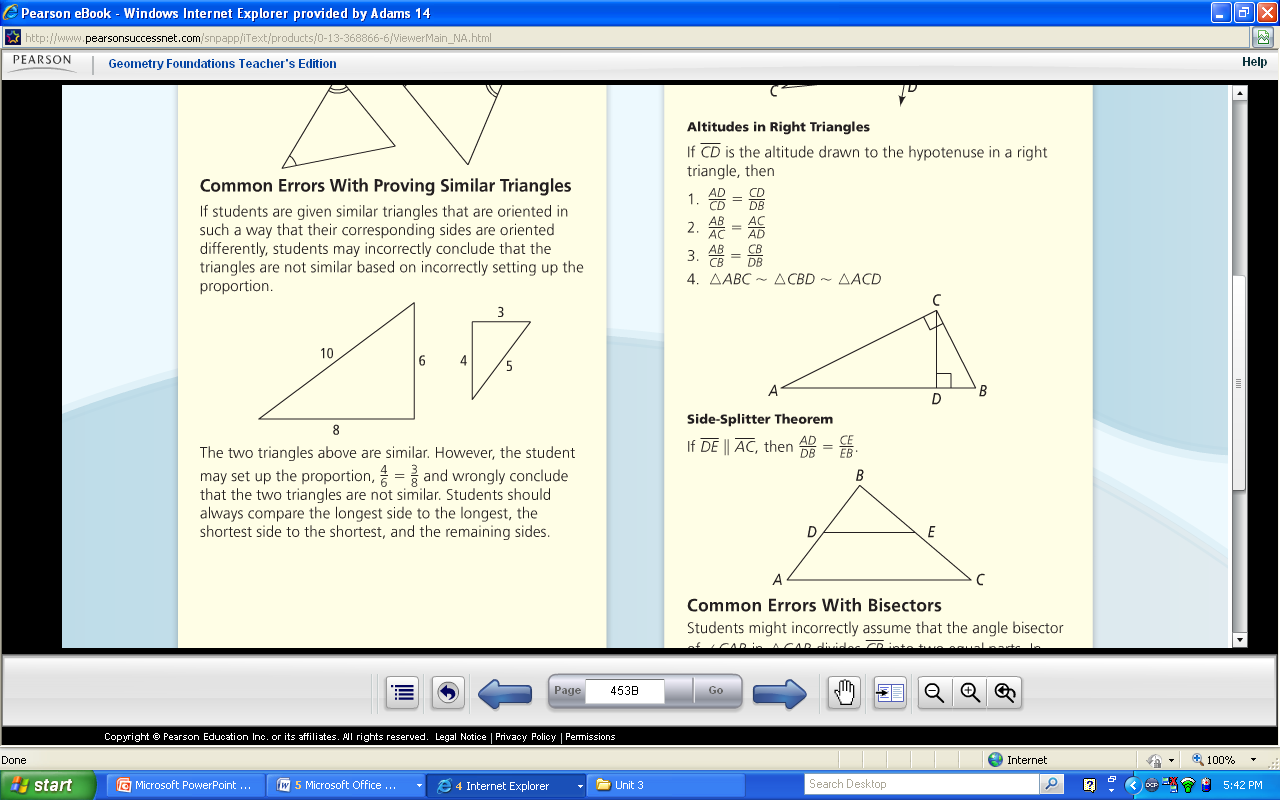


Counter example

7. Determine if the following two figures are similar.

Write a proportion to either show that they are or

are not similar.



8. Solve for x.

The Pythagorean Theorem is a2+b2 = c2 where a and b are the legs of the triangle and c is the hypotenuse.

x

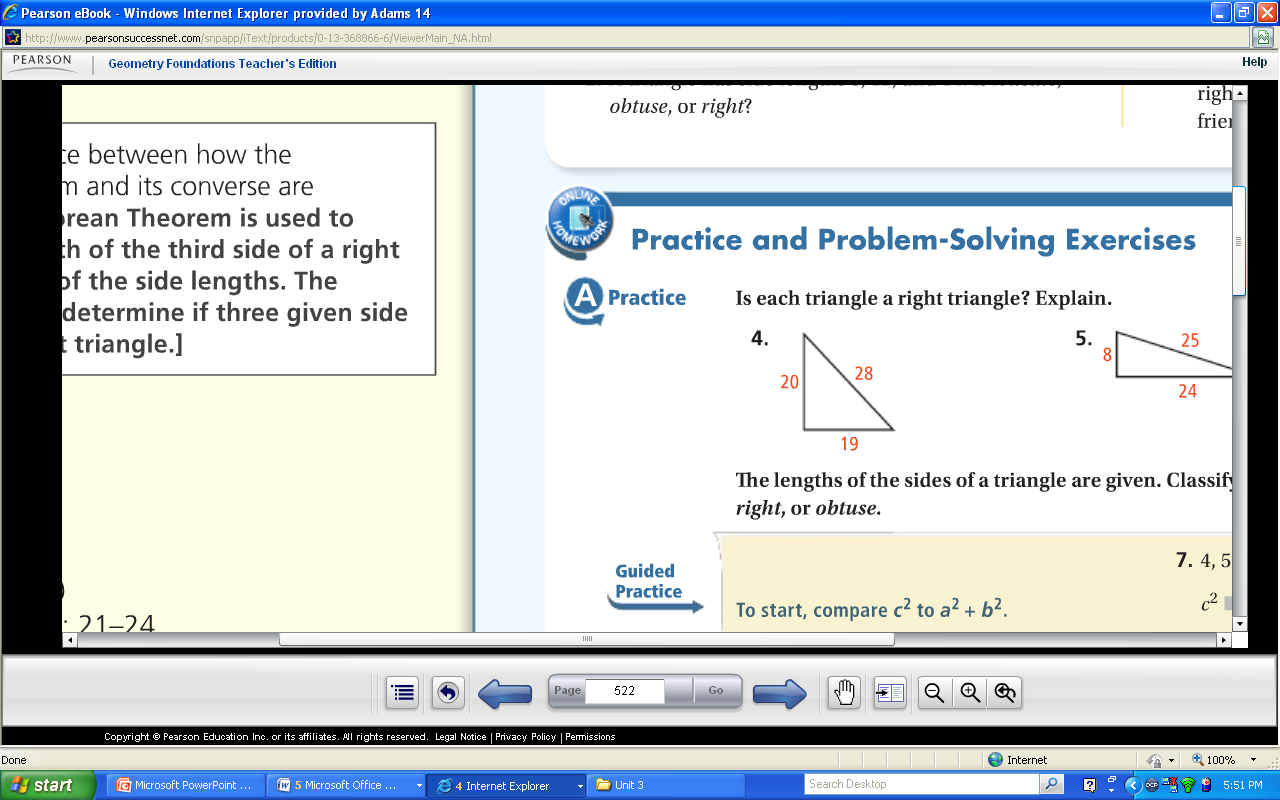
7

24

x = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

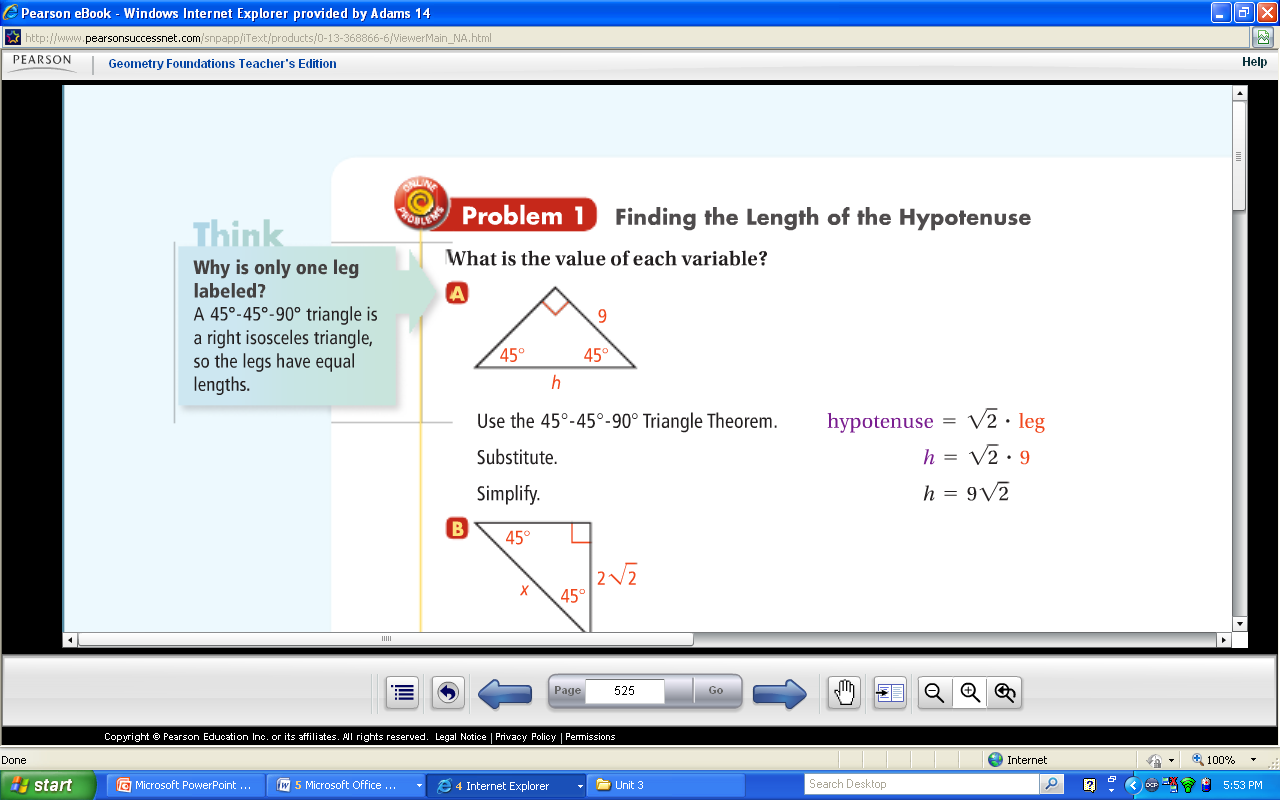
9. Determine if the triangle is a right triangle.

If it’s a right triangle, then the Pythagorean Theorem holds true.



10. Solve for h.

There are special properties for certain type of triangles.



h = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Exit Ticket

The main ideas that this unit will cover are… \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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Rate your familiarity with the content covered on this pre-assessment.

1 2 3 4 5

Never seen Seen some Can do some Mastered some Mastered all